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REMARKS

This paper is being filed in response to the Office Action dated May 6, 2005. For the following reasons, this application should be considered in condition for allowance and the case passed to issue.

The allowance of Claims 8-12 and 14, as well as the indication of allowability of Claims 4 and 6-7, is gratefully acknowledged. However, at this time, Claims 4 and 6-7 have not been rewritten into independent form to include all of the limitations of the base claim and any intervening claims.

Claims 1-3, 13 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Eden et al. (hereafter "Eden") in view of Kotani et al. (hereafter "Kotani"). This rejection is hereby traversed and reconsideration and withdrawal thereof are respectfully requested. The following is a comparison of the present invention as claimed with the Eden and Kotani references, in combination.

The present invention, as well as the Eden reference, were discussed at length in the Response to the previous Office Action, filed on March 1, 2005. Hence, the extended discussion of the invention and Eden will not be repeated in this response. However, it should be noted that Eden provides an initial layout and then increases the overlap of each side of each via by a first predetermined amount. The overlap of each side of each via is then checked to determine if the increase in the overlap violates a design rule. If so, the overlap is removed and a second, smaller amount of overlap is provided to those sides of those vias which violated the design rule with a larger overlap. This second amount of overlap, smaller than the first amount, is then checked to determine if any of these smaller overlaps violate the design rule. If so, these overlaps are removed. This process is continued until there are no design rule violations.

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Hence, after increasing the size of the first line, and then determining that a design rule has been violated, Eden reduces the size of the overlap of the via in the first line without performing any reduction in the second line. This compromises the security of the via and line overlap connection. By contrast, the present invention does not reduce the enlarged line overlapping the via, but rather performs a reduction in the line that does not have the via at the point of design violation. The Examiner conceded that Eden fails to teach a method/apparatus/program for generating a circuit layout in which when the distance between the touched edge of the overlying metal line (contact area) and the edge of the adjacent metal line is less than the predetermined distance, increasing a dimension of the overlying metal line and decreasing a dimension of the adjacent metal line.

For providing this missing feature of Eden, the Examiner now turns to Kotani. However, as will be demonstrated, reliance on Kotani to supply this missing feature is misplaced.

Kotani, U.S. Patent No. 6,853,743, relates to a mask pattern correction method and system. Kotani describes, at the sections cited by the Examiner, moving correction target edges on the basis of a correction value calculated by a simulation, as well as the step of moving a correction target edge on the basis of a correction value set. Kotani does not appear to provide any specific description or suggestion regarding a situation where the distance between the touched edge of an overlying metal line and the edge of an adjacent metal line is less than a predetermined distance, and where one of the overlying lines has been increased. The general description of setting the line widths W in Kotani is provided, as well as general adjustment of these line widths. However, the claimed features of Claims 1, 13 and 15 are not specifically taught by Kotani, nor suggested. Neither Eden nor Kotani suggest the decreasing of an adjacent metal line in the specific instance of having already increased the dimension of an overlying metal line when the predetermined distance between the overlying metal line and the edge of the adjacent metal line is at least a predetermined

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distance, but then decreasing a size of the adjacent metal line if the distance between the touched edge of the overlying metal line and the edge of the adjacent metal line is less than the predetermined distance.

For example, Kotani does not describe the forming of an overlying metal line over a via with at least one edge touching an edge of the overlying metal line. Therefore, Kotani cannot show or suggest a motivation for manipulating the dimensions of the specific lines as claimed in the present invention.

Since the combination of Kotani and Eden do not show or make obvious the claims of the present invention, the rejection of Claims 1-3, 13 and 15 under 35 U.S.C. §103(a) should be reconsidered and withdrawn and such action is courteously solicited.

In light of the remarks above, this application should be considered in condition for allowance and the case passed to issue. If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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